

## Wine Recipes

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The following three recipes are taken from The Closet of Sir Kenelm Digbie Kt. Opened... Please note that all three of these are non-grape wines made from other fruits. Note, also, that two of them call for the addition of sugar. The use of sugar in cooking and winemaking had been in practice for 300 years or more by the writing The Closet... as evidenced by the mention of both 'powdered sugar' and 'crystallized sugar' in a cookbook written in 1392, mentioned by Leechdom, and the following quote written in a letter only one century later in the Paston Letters, '...send me an other sugar loff, for my old one is do.'<sup>56</sup>

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### The Countess of Newport's Cherry Wine

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Pick the best cherries free from rotten, and pick the stalks from them; put them into an earthen Pan. Bruise them, by griping and straining them in your hands, and let them stand all night; on the next day strain them out (through a Napkin, which if it be a course and thin one, let the juyce run through a Hippocras or gelly bag, upon a pound of fine pure Sugar in powder, to every Gallon of juyce) and to every gallon put a pound of Sugar, and put it into a vessel. Be sure your vessel be full, or your wine will be spoiled; and in every bottle you must put a lump (a piece as big as a Nutmeg) of Sugar. The vessel must not be stopt until it hath done working.

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### Strawberry Wine

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Bruise the Strawberries, and put them into a Linnen-bag which hath been a little used, that so the Liquor may run through more easily. You hang in the bag at the bung into the vessel, before you do put in your Strawberries. The quantity of the fruit is left to your discretion; for you will judge to be there enough of them, when the color of the

wine is high enough. During the working, you leave the bung open. The working being over, you stop your vessel. Cherry-wine is made after the same fashion. But it is a litle more troublesome to break the Cherry-stones. But it is necessary, that if your Cherries be of the black soure Cherries, you put to it a little Cinnamon, and a few Cloves.

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## To Make Wine of Cherries Alone

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Take one hundred pounds weight, or what quantity you please, of ripe, but sound, pure, dry and well gathered Cherries. Bruise and mash them with your hands to press out all their juyce, which strain through a boulter cloth, into a deep narrow Wooden tub, and cover it close with clothes. It will begin to work and ferment within three or four hours, and a thick foul scum will rise to the top. Skim it off as it riseth to any good head, and presently cover it again. Do this till no more great quantity of scum arise, which will be four or five times, or more. And by this means the Liquor will become clear, all the gross muddy parts rising up in a scum to the top. When you find that the height of the working is past, and that it begins to go less, tun it into a barrel, letting it run again through a boulter, to keep out all the gross feculant substance. If you should let it stay before you tun it up, till the working were too much deaded, the wine would prove dead. Let it remain in the barrel close stopped, a month or five weeks. Then draw it into bottles, into each of which put a lump of fine Sugar, before you draw the wine into it, and stop them very close, and set them in a cold Cellar. You may drink them after three or four months. This wine is exceeding pleasant, strong, spiritful and comfortable.

The following is a selection on the making of hippocras (a spiced and sweetened wine, often served steaming hot).<sup>57</sup>

To make Ypocrasse for lords with gynger, synamon, and graines, sugour, and turnesol: and for comyn pepul, gynger, canell, longe peper, and clarified hony.

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## Mead Recipes

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A list of herbs and spices used in the making of Metheglin can be found in the following excerpt from 'A Receipt to make a Tun of Metheglyn' in The Closet of Sir Kenelm Digbie Kt. Opened, Whereby is Discovered Several ways of making of Metheglin, Sider, Cherry Wine, &c:<sup>58</sup>

Take two handfulls of Dock (alias wild carrot) a reasonable burthen of Saxifrage, Wild-Sage, Blew-button, Scabious, Bettony, Agrimony, Wildmarjoram, of each a reasonable burthen; Wild thyme a Peck, Roots and all. The Garden-herbs are these; Bayleaves, and Rosemary, or each two handfulls; A Sieveful of Avens, and as much Violet-leaves: A handful of Sage; and three handfulls of Sweet-Marjoram. Three Roots of young Borrage, leaves and all; Two handfulls of Parsley-roots; Two Roots of Elecampane: Two handfulls of Fennel: a peck of Thyme; wash and pick all your herbs from filth and grass.

The following recipe is also taken from The Closet of Sir Kenelme Digbie... on page 5:

A RECEIPT TO MAKE METHEGLIN AS IT IS  
MADE AT LIEGE, COMMUNICATED BY MR.  
MASILLON

Take one Measure of Honey, and three Measures of Water, and let it boil till one measure be boiled away, so that there be left three measures in all; as for Example, take to one Pot of Honey, three Pots of Water, and let it boil so long, till it come to three Pots. During which time you must Skim it very well as soon as any scum riseth; which you are to continue till there rise no scum more. You may, if you please, put to it some spice, to wit, Cloves and Ginger; the quantity of which is to be proportioned according as you will have your Meath, strong or weak. But this you do befor it begin to boil. There are some that put either Yeast of Beer, or Leaven of Bread into it, to make it work. But this is not necessary at all; and much less to set it into the Sun. Mr. Masillon doth neither the one nor the other. Afterwards for to tun it, you must let it grow Luke-warm, for to advance it. And if you do intend to keep your Meathe for a long time, you may put into it some hops on this fashion. Take to every Barrel of Meathe a Pound of Hops without leaves, that is, Ordinary Hops used for Beer, but well cleansed, taking only the Flowers, without the Green-leaves and stalks. Boil this Pound of Hops in a Pot and a half of fair water, till it come to one Pot, and this quantity is sufficient for a Barrel of Meathe... When you Tun your Meathe, you must not fill your Barrel by half a foot, that so it may have room to work. Then let it stand six weeks slightly stopped; which being expired, if the Meath do not work, stop it up very close. Yet must you not fill the Barrel to the very brim. After six Months you draw off the clear into another Barrel, or strong Bottles, leaving the dregs,

and filling up your new Barrel, or Bottles,  
and stopping it or them very close.

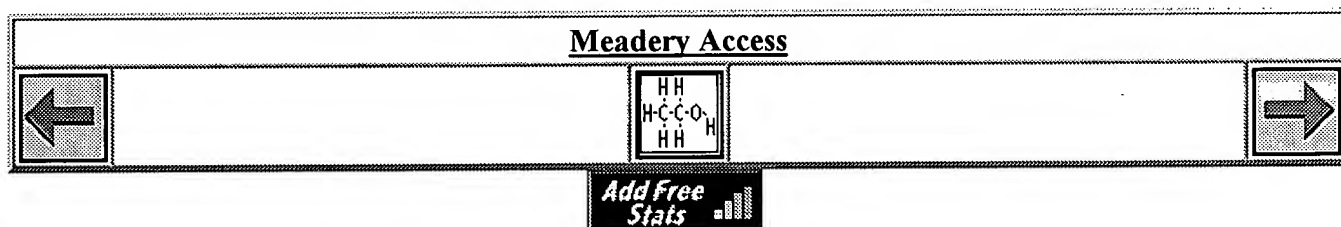
The Meath that is made this way, (Viz. In  
the Spring, in the Month of April or May,  
which is the proper time for making of it,)  
will keep for many a year.

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This next mead recipe is taken from The Country Housewife:

Take eight Gallons of Water, and as much  
Honey as will make it bear an egg; add to this  
the Rinds of six Lemmons, and boil it well,  
scumming it carefully as it rises. When 'tis  
off the Fire, put to it the Juice of the six  
Lemmons, and pour it into a clean Tub, or  
earthen Vessel, if you have one large enough,  
to work three days, then scum it well, and  
pour off the clear into the Cask, and let it  
stand open till it has done making a hissing  
Noise; after which stop it up close, and in  
three months time it will be fine, and fit for  
bottling.

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T /9/37,40,48,50,61

**6/9/37 (Item 8 from file: 51)**

DIALOG(R)File 51:Food Sci.&Tech.Abs

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00633294 91-12-h0018 SUBFILE: FSTA

**(Inhibitory function of hops (*Humulus lupulus* L.) toward cell growth of microorganisms.)**

Nishiyama, R.; Kozaki, M.

Course of Living Sci., Teikyo Senior Coll., 31-1, Honmachi-6, Shibuya-ku, Tokyo 151, Japan

Journal of Antibacterial and Antifungal Agents, Japan 1991 , 19 (5) 217-224

NOTE: 20 ref.

DOCUMENT TYPE: Journal Article ISSN: 0385-5201

LANGUAGE: Japanese SUMMARY LANGUAGE: English

With regard to the antimicrobial function of hops (*Humulus lupulus* L.), which are added to give a refreshing aroma and bitterness in the making of beer, fresh and old hops were compared. For this, the growth inhibiting pattern of polyphenols and resins found in hops was investigated. In synthetic and natural medium hops demonstrated an inhibitory pattern against *Leuconostoc mesenteroides* P-60 that was similar to that shown by quercetin and o-coumaric acid. Old hops had a lower inhibiting activity towards lactic acid bacterial growth compared with that of fresh hops. Old hops showed a higher inhibiting activity against other microorganisms like *Acetobacter* spp., *Pseudomonas* spp., *Escherichia coli* and yeast strains. Results can be attributed to the fact that resins in old hops have a lower inhibiting activity against *L. mesenteroides* P-60, while the polyphenols in old hops have a higher inhibiting activity against the growth of *Pseudomonas fluorescens* and *Saccharomyces cerevisiae* studied. (AS(WAT))

DESCRIPTORS (HEADINGS): Microorganisms; Inhibition; Hops

DESCRIPTORS: ANTIMICROBIAL ACTIVITY

GENERAL DESCRIPTORS: Flavourings

SECTION HEADINGS: Alcoholic & non-alcoholic beverages (SC=h)

**6/9/40 (Item 11 from file: 51)**

DIALOG(R)File 51:Food Sci.&Tech.Abs

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00230250 82-12-h1896 SUBFILE: FSTA

**(Studies on the antimicrobial effect of hop constituents and their transformation products against microorganisms occurring in breweries.)**

**Untersuchungen zur antimikrobiellen Wirksamkeit von Hopfeninhaltsstoffen und deren Umwandlungsprodukten gegenueber Mikroorganismen in der Brauerei.**

Jaehrig, A.; Schade, W.

Sektion Nahrungsgueterwirtschaft & Lebensmitteltech., Humboldt-Univ., Berlin

Lebensmittelindustrie 1981 , 28 (7) 311-315

NOTE: 19 ref.

DOCUMENT TYPE: Journal Article

LANGUAGE: German SUMMARY LANGUAGE: English; Russian; French

The antimicrobial effect of hop constituents (HC) was tested on various microorganisms: *Bacillus subtilis*, *Sarcina flava*, *Escherichia coli*, *Pediococcus cerevisiae*, *Lactobacillus leichmannii*, *Lactobacillus* sp. strains 1 and 28 (from beer dregs) and *Saccharomyces uvarum*. Further trials were conducted on the effect of HC on the biological stability of beer, using 10 lactic acid bacteria, 8 wort bacteria, and 2 yeast spp.; and on the effect of HC on the development of contaminant organisms during fermentation. Results show that hops have the greatest antimicrobial effect against Gram positive organisms. Many strains are, however, resistant to HC, thus only conditional protection is afforded against microorganisms causing beer-spoilage. Various hop preparations tested had similar

inhibitory effects; and all isomerized hop extracts, irrespective of conditions of manufacture, exhibited similar antimicrobial characteristics. Overall, results indicate that bittering beer after primary fermentation by addition of isomerized hop extract should not incur additional infection risks. (IN)

DESCRIPTORS: Hops--beer, hops antimicrobial activity in; Microorganisms--beer, hops antimicrobial activity in; Beer--hops antimicrobial activity in beer

SECTION HEADINGS: Alcoholic & non-alcoholic beverages (SC=h)

6/9/48 (Item 2 from file: 53)

DIALOG(R)File 53:FOODLINE(R): Food Science & Technology

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00902772 FOODLINE ACCESSION NUMBER: 576296

**Compositions containing hops extract and their use in water systems and process streams to control biological fouling.**

Cooper A J; Dallmier A W; Barnes H

PATENT ASSIGNEE: Ondeo Nalco Co

PATENT: WO 0205637 A1

APPLICATION COUNTRY: US (DATE(S):18.7.2000)

DESIGNATED STATES:

SeepublishedpatentdocumentforDesignatedContractingStates.

X-REFERENCE: PROCESSING

LANGUAGE: English

DOCUMENT TYPE: Patent

FOODLINE UPDATE CODE: 20020305

ABSTRACT: There are many naturally occurring substances with biocidal properties. Hop extract is effective against Gram-positive bacteria. Details are given of a method for controlling biological fouling in water systems and process streams using hop extract. The preferred concentration is 0.1-10 ppm. The hops extract may be stabilized with a surfactant. Other biocides may be added to the water system in combination with the hop extract.

SECTION HEADING: PROCESSING

DESCRIPTORS: ANTIMICROBIALS; BIOCIDES; EXTRACTS; HOP EXTRACT; NATURAL ANTIMICROBIALS; PATENT; PCT PATENT; WATER TREATMENT

6/9/50 (Item 4 from file: 53)

DIALOG(R)File 53:FOODLINE(R): Food Science & Technology

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00868916 FOODLINE ACCESSION NUMBER: 545718

**An antibacterial composition for control of Gram-positive bacteria in food applications.**

King W; Ming X

PATENT ASSIGNEE: Rhodia Inc

PATENT: WO 0105254 A2

APPLICATION COUNTRY: US (DATE(S):14.7.1999 14.7.2000)

DESIGNATED STATES:

SeepublishedpatentdocumentforDesignatedContractingStates.

X-REFERENCE: ADDITIVES

LANGUAGE: English

DOCUMENT TYPE: Patent

FOODLINE UPDATE CODE: 20010227

ABSTRACT: There have been many attempts to develop effective antibacterial treatments for Gram-positive pathogenic bacteria that are active at reasonable usage levels and safe for food applications. This patent application discloses a composition comprising a first component that includes at least one of the following Gram-positive bacteriostatic or bactericidal compounds: lantibiotics, pediocin, lacticin class bacteriocins, and lytic enzymes. The second component includes at

least one compound from the following: hops acids, hops acids derivatives, hops resin and hops resin derivatives. The composition can be used in foods and on food-contact surfaces. The composition is effective against *Listeria monocytogenes* and is active at refrigeration and storage temperatures typical of foods at risk for contamination by *Listeria*. The composition is claimed to be more effective than any of the individual components or previously published compositions.

## SECTION HEADING: ADDITIVES

DESCRIPTORS: ANTIMICROBIAL MIXTURES; ANTIMICROBIALS; BACTERIA; HOP PRODUCTS; LANTIBIOTICS; LISTERIA; MICROORGANISMS; PATENT; PCT PATENT; PEDIOCINS; PRESERVATIVES

6/9/61 (Item 15 from file: 53)

DIALOG(R)File 53:FOODLINE(R): Food Science & Technology  
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00583421 FOODLINE ACCESSION NUMBER: 400376

**Process to stop the growth of thermophilic microorganism in an aqueous sugar containing medium.**

Pollach G

PATENT ASSIGNEE: Zuckerforschung Tulln GmbH

PATENT: EP 681029 A2

APPLICATION COUNTRY: AT (DATE(S): 19940506)

PRIORITY APPLICATION DATE: 19950406

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

LANGUAGE: German

DOCUMENT TYPE: Patent

FOODLINE UPDATE CODE: 19960130

ABSTRACT: This process has been developed to inhibit the growth of thermophilic microorganisms in extracts and juices obtained from plants such as sugar beet and sugar cane and in sugar solutions of all kinds. At the temperatures used in sugar-beet extraction plants, thermophilic bacteria can break down the sucrose to form glucose, fructose, acids and gaseous metabolic products. To prevent such problems without the use of chemicals it is disclosed that a hop-based additive has a bacteriostatic effect when used at temperatures between 50 and 80 C. A dissolved or emulsified hop extract is the additive of choice, but dried hops, pellets, dried extract, spent hops, and brewers' yeast that contains hop residues can also be used. The additive is introduced during the thermal extraction process.

## SECTION HEADING: SWEETENERS

DESCRIPTORS: BACTERIA; EUROPEAN PATENT; HOPS; INHIBITION; MICROORGANISMS; SOLUTIONS; SUGAR; SUGAR SOLUTIONS; THERMOPHILIC; THERMOPHILIC BACTERIA; THERMOPHILIC MICROORGANISMS

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T /9/11

4/9/11 (Item 3 from file: 53)

DIALOG(R) File 53:FOODLINE(R): Food Science & Technology

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00314631 FOODLINE ACCESSION NUMBER: 339297

**Antimicrobial activity of hop resins.**

Haas G J; Barsoumian R

Journal of Food Protection 57 (1), 59-61 (9 ref.)

1994

LANGUAGE: English

DOCUMENT TYPE: Journal article

FOODLINE UPDATE CODE: 19940413

ABSTRACT: Hops in brewing are used to impart a bitter flavour and for their preservative action. Hop resins were tested for activity in inhibiting growth of 5 species of bacteria. Beta hop resins (lupulones) were more active than the iso-alpha resins (iso-humulones). Resistance development was studied in *Streptococcus salivarius*, *Staphylococcus aureus* (2 strains) and *Bacillus megaterium*; this last species was the least prone to develop resistance. *Escherichia coli* B was not sensitive to either hop resin used.

SECTION HEADING: MICROBIOLOGY

DESCRIPTORS: ANTIMICROBIAL RESISTANCE; ANTIMICROBIALS; BACTERIA;  
BACTERIAL ANTIMICROBIALS; HOPS; INHIBITION; RESINS; RESISTANCE;  
TYPE

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T /9/1

2/9/1 (Item 1 from file: 9)  
DIALOG(R) File 9:Business & Industry(R)  
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01962287 (THIS IS THE FULLTEXT)

**Cultor Food Science**

(John I Hass Inc to acquire brewery ingredients business of Cultor Food Science Inc)

Chemical Market Reporter, v 252, n 14, p 18

October 06, 1997

DOCUMENT TYPE: Journal ISSN: 0090-0907 (United States)

LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 183

**TEXT:**

CULTOR FOOD SCIENCE Inc. is selling its brewery ingredients business to John I. Haas Inc. of Washington, D.C., an industry leader in hop growing, processing and technology.

John I. Haas will acquire all the assets associated with the brewery product line, which includes the ingredients Aromahop, Isohop, Redihop and CO2 hop extract, as well as production facilities in Milwaukee, Wise., and Sidney, Neb.

"The purchase of Cultor's brewery products allows us to enhance our own product line and at the same time to meet increasing demand for CO2 hop extracts," says Henry F. von Eichel, chairman, president and CEO of John I. Haas.

Because Cultor is looking to make an acquisition to bolster its flavor development business, analysts see this as a precursor to raise funds to make a deal. "We see this divestiture as an opportunity to place our brewery business with a company sharing a similar strategic direction, while allowing the Flavor division to strengthen its focus on our primary business of flavor development for the food and beverage industry," says Carlo W. Colesanti, president of Cultor Food Science's Flavor division.

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COMPANY NAMES: CULTOR FOOD SCIENCE INC; JOHN I HAAS  
INDUSTRY NAMES: Agriculture  
PRODUCT NAMES: Hops (013956)  
CONCEPT TERMS: All company; Mergers & acquisitions  
GEOGRAPHIC NAMES: North America (NOAX); United States (USA)  
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*Not cited  
for date*